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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,798	01/05/2004	Shinichi Mihara	12577/27	1831
7590 02/10/2005				
KENYON & KENYON 1500 K Street, N.W., Suite 700 Washington, DC 20005		EXAMINER HASAN, MOHAMMED A		
		ART UNIT PAPER NUMBER		
		2873		

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/750,798

Applicant(s)

MIHARA ET AL.

Examiner

Mohammed Hasan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 - 34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 - 14, 16, 17, 31 - 34 is/are allowed.
- 6) ☒ Claim(s) 15, 18, 19, 21, 23 - 24, 26, 30 is/are rejected.
- 7) ☒ Claim(s) 20, 22, 25, 27 - 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/5/2004</u> . | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Priority***

1. Receipt of acknowledged of papers submitted under 35 U.S.C. 119 (a) – (d), which papers have placed of record in the file.

***Oath/Declaration***

2. Oath and declaration filed on 6/8/2004 is accepted.

***Information Disclosure Statement***

3. The prior art documents submitted by applicant in the Information Disclosure Statement filed on 1/5/2004 have all been considered and made of record (note the attached copy of form PTO – 1449).

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 15, 21, 23, 24, 26 and 30 are rejected under 35 U.S.C. 102 (b) as being anticipated by Nozaki et al (5,193,030).

Regarding claim 15, Nozaki et al discloses (refer to figure 8) a zoom lens comprising: a first lens unit (lenses 101 and 102) with positive refractive power, located at a most object-side position, a second lens unit (lenses 103 and 104) with a negative refractive power, located on an image side of the first lens unit and a third lens unit (lenses 105 and 106) with a positive refractive power, located on the image side of the second lens unit, wherein the first lens unit has two aspherical surface and when a magnification of the zoom lens is changed in a range from a wide-angle position to a telephoto position , the second lens unit is moved and the third lens unit is simply moved toward an object side ( column 3, lines 54 – 62, column 6, lines 8 – 15, Example 1, i.e., second and third lens moving toward an object as shown in figure 8).

Regarding claim 21, Nozaki et al discloses (refer to figure 8) wherein the second lens unit (elements 103 and 104) includes, in order from the object side along an optical path, a biconcave lens (103) and a positive lens (104) (Example 1).

Regarding claim 23, Nozaki et al discloses (refer to figure 8) wherein a lens unit (i.e., lens element 107) is movable for focusing is placed on the image side of the third lens unit (column 6, lines 8 – 18).

Regarding claim 24, Nozaki et al discloses (refer to figure 8) wherein a most object-side lens unit (i.e., lenses 101 and 102) is substantially fixed with respect to an image plane (Examples 1).

Regarding claim 26, Nozaki et al discloses (refer to figure 1) wherein an aperture stop fixed with respect to an image plane is interposed between the second lens unit (22) and the third lens unit (23) and one prism (25) and three or less single lenses are arranged on the object side of the aperture stop (column 4, lines 30 – 49).

Regarding claim 30, Nozaki et al discloses (refer to figure 8) a zoom lens comprising: a first lens unit with positive refractive power, located at a most object-side position, a second lens unit with a negative refractive power, located on an image side of the first lens unit and a third lens unit with a positive refractive power, located on the image side of the second lens unit, wherein the first lens unit has two aspherical surface and when a magnification of the zoom lens is changed in a range from a wide-angle position to a telephoto position, the second lens unit is moved and the third lens unit is simply moved toward an object side, the image processing unit (i.e., 108 is an image formed) steps that image data imaged by the electronic image sensor are electrically processed and contour is changed (column 3, lines 54 – 62, column 6, lines 8 – 19, Example 1).

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 18 and 19 are rejected under 35 U.S.C. 102 (e) as being anticipated by Ishii et al (6,744,571 B2).

Regarding claim 18, Ishii et al discloses (refer to figures 1a and 1b) a zoom lens comprising: a first lens unit (G1) with positive refractive power, located at a most object-side position, a second lens unit (G2) with a negative refractive power, located on an image side of the first lens unit and a third lens unit (G3) with a positive refractive power, located on the image side of the second lens unit, wherein the second lens unit (G2) and the third lens unit (G3) have four aspherical surfaces and when a magnification of the zoom lens is changed in a range from a wide-angle position to a telephoto position , the second lens unit is moved and the third lens unit is simply moved toward an object side (column 14, lines 36 – 47, examples 1 - 3).

Regarding claim 19, Ishii et al discloses (refer to figures 1a and 1b) a zoom lens comprising: a first lens unit (G1) with positive refractive power, located at a most object-side position, a second lens unit (G2) with a negative refractive power, located on an image side of the first lens unit and a third lens unit (G3) with a positive refractive power, located on the image side of the second lens unit, wherein each of the second lens unit (G2) and the third lens unit (G3) has two aspherical surface and when a magnification of the zoom lens is changed in a range from a wide-angle position to a telephoto position , the second lens unit is moved and the third lens unit is simply moved toward an object side (column 14, lines 36 – 47, examples 1 - 3).

***Allowable Subject Matter***

6. Claims 1 – 14, 16, 17, and 31 – 34 are allowed.

7. The following is an examiner's statement of reasons for allowance: The prior art taken either singularly or in a combination fails to anticipate or fairly suggest the limitations of the independent claims, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims 1, 14, 16, 17, 31 and 34, for example, which include a zoom lens having a lens unit located at a most object – side position, a moving lens unit with positive refractive power located on an image side and the moving lens unit moved toward the object side when a magnification of the zoom lens changed from wide angle to telephoto end and the satisfy the following condition:  $0.8 < y_{07} / (f_w \cdot \tan \omega_{07w}) < 0.96$ , where  $f_w$  is a focal length of an entire system of the zoom lens at the wide-angle position,  $y_{07}$  is an image height expressed by  $0.7 \times y_{10}$ , where  $y_{10}$  is a distance from a center to a point farthest therefrom on an effective imaging surface of an electronic image sensor, and  $\omega_{07w}$  is an angle made by a direction of an object point with an optical axis, where the object point corresponds to an image point that is at the point  $y_{07}$  away from the center on the effective imaging surface of the electronic image sensor at the wide angle position (claims 1 and 14); and the first lens unit and the second lens unit have four aspherical surfaces (claims 16 and 17); and the first lens unit has a reflecting surface and a magnification of the zoom lens changed from a wide-angle to a telephoto position, the second lens unit is moved and the third lens unit

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moved toward an object side and to satisfy the following conditions:  $-1.0 \leq \beta_2 W \leq -0.40$ ,  $-1.0 \leq \beta_3 W \leq -0.40$  where  $\beta_2 W$  is the magnification of the second lens unit at the wide-angle position and  $\beta_3 W$  is the magnification of the third lens unit at the wide-angle position (claims 31 and 34).

8. Claims 20, 22, 25, and 27 – 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to show third lens unit includes, in order from the object side along an optical path, an optical element of divergence and appositive lens, and third lens unit includes, a single positive lens, a cemented lens component of a positive lens and a negative lens with a concave surface of strong power, an aperture stop is fixed with respect to an image plane is interposed between the second lens unit and third lens unit, one prism and three or single lenses are arranged on the object side of the aperture stop, the second lens unit and the third lens unit are adjacent to each other, with an aperture stop between the second lens unit and the third lens unit and satisfy the following condition:  $0.50 < D_3 / D_2 < 1.40$ , where  $D_2$  is a distance, measured along an optical axis, from a vertex of a most image-side surface of the second lens unit to the aperture stop at the wide-angle position and  $D_3$  is a distance, measured along the optical axis, from the aperture stop to the vertex of a most object-side surface of the third lens unit at the wide-angle position, and the following condition:  $0.8 < y_{07} / (f_w \cdot \tan \omega_{07w}) < 0.96$ , where  $f_w$  is a focal length of an entire system of the zoom lens at the



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wide-angle position,  $y_{07}$  is an image height expressed by  $0.7 \times y_{10}$ , where  $y_{10}$  is a distance from a center to a point farthest therefrom on an effective imaging surface of an electronic image sensor, and  $\omega_{07w}$  is an angle made by a direction of an object point with an optical axis, where the object point corresponds to an image point that is at the point  $y_{07}$  away from the center on the effective imaging surface of the electronic image sensor at the wide angle position.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The closest prior art

Hagimori et al (6,728,482 B2) discloses an imaging device and digital camera using the image device.

Yamasita (4,059,344) discloses a retrofocus- type objective for endoscopes.


### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammed Hasan whose telephone number is (571) 272-2331. The examiner can normally be reached on M-TH, 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272- 2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MH  
February 3, 2005



Georgia Epps  
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